

ROA 02-05-03
09/683,812In the Specification:

Please amend the specification filed February 19, 2002, as follows:

Between paragraphs [0002] and [0003], please add the following header:

Summary of the Invention.

Please replace paragraphs [0019], [0020], [0021], [0023], [0024], [0026], [0028], and [0030] with the following replacement paragraphs:

[0019]

Referring initiall to Fig. 1, The relationship between the rear cell adapter 20 which
is screwed into the end of the telescope SCT and provides interior throat to receive a
standard telescope eyepiece 29, such as ~~(by way of example, only)~~ including, but not
limited to, a 55 mm Plossl eyepiece offered by Televue, a retailer of lens systems for
telescopes. The yoke 30 is fitted around the rear cell adapter and secured to the
adapter by manual set screws 60. A generally square rail 100 is inserted in the
longitudinal groove 85 formed on the outer edge of the yoke assembly 30. The
generally square profile of the groove mates with the square rail 100 to form a snug fit
which inhibits twisting motion of the rail/platform system in use. The square rail 100 is
fixed in the groove by manually set compression screw 90 that compressively engages
in the profile 85 and holds the rail to prevent movement in the yoke assembly 30. As
may be further appreciated from Fig. 1, rail 100 is provided with a groove or slot 81 at its
distal end to permit access to the ball set screw mechanism of the platform to adjust the
angle or tilt of the platform after mounting the camera or other device. The rail 100 is
may also provided with set screws and holes at 80 and ~~80"~~ 80' which ~~may~~ would be
inserted to prevent the rail from being accidentally moved out of the grooves 85 or 86,
thus preventing and thereby prevents the accidental removal of the camera platform
200 from the rail 100, or the rail 100 from the yoke 85 during ~~the period of set up and~~
adjustment. Set screw 80 may be used to lock the rail 100 into the yoke at hole
adjacent the SCT yoke plate ~~or~~ and set screw 80' may be used to lock the rail 100 into
the camera platform ~~at hole 80"~~ to prevent the movement of the camera platform ~~back~~
~~off of~~ relative to the rail while the operator's attention may be focused on viewing

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through the lens to set up the camera. Rail **100** is sufficiently strong to prevent any torque or twisting of the camera base in operation.

[0020]

Q1
Cont The operation of the apparatus of the present invention may best be understood by viewing the cooperation of the parts of the platform **200** as more fully shown in a disassembled form in Fig. 2. Fig. 2 is a left posterior exploded view of the platform **200**. Camera adapter plate **260** is attached to the camera or other device with threaded bolt **265 265'** and then inserted from the opposite face into a groove **261**. This adapter plate permits movement within the groove **261**, which engages lip or T-edge **261' 261''**, to permit axial alignment of the camera with the longitudinal axis of the **SCT**. This slideable engagement permits the user to align the camera shutter with the eyepiece of the telescope along what may be described as the x-axis as shown in Fig. 1. Once aligned the camera platform, with the adapter plate attached, may be locked by set screw **291** in any of the threaded holes on the back face **290** of the carrier.

[0021]

The camera **31** (as shown in Fig. ~~14~~ Fig's 7-9, for example) or the videocamera **VC** shown in Fig. ~~47~~ 10, and adapter plate **260** are then engaged in the platform **200** which is in turn attached to the rail **100** supported by the yoke **30** and rear cell adapter **20** which are mounted around the lens **29** on the telescope. The yoke **30** is held to the rear cell adapter **20** by manually engaged set screws **60** and the rail is held fast by manually engaged set screws **90**. Upon alignment of the camera lens with the telescope lens **29**, as noted in Fig. 2, set screw **270** is tightened to hold the platform **200** set on rail **100**. The movement of the camera platform **200** on the rail **100** may be described as movement along the y-axis in the context of Fig. 1.

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[0023]

Further, as shown in Fig. 2, once the camera lens is axially aligned with the telescope eyepiece, stop screw **281** may then be moved into engagement with camera adapter **260** to fix the point of alignment. A set screw in bore **282** is then set to engage the stop screw and maintain it at the appropriate setting for the camera to permit removal without disturbing the settings. Set screws **291** are engaged in set screw holes on the back face of platform 290 to rigidly hold the camera adapter **260** against the T-edge 261' 261". Set screws are disengaged to permit the camera to be removed from the platform **200** without changing any of the settings for alignment purposes. It is expected that once all of the adjustments are made for a particular camera and lens combination, little or no time will be required by the operator to assemble and disassemble the camera and telescope together.

[0024]

a2. Tilttable platform **290**, which supports the camera platform **260**, may be pivoted about the axis formed by shoulder bolts **321** which engage the tilttable platform and connect it to the base platform **320**. As more readily shown in Fig. 2a (which is another posterior view as seen from the opposite side of Fig. 2), a ball-headed screw **325**, which slideably engages in the semi-circular profile 325" 325' on the lower side of tilttable platform **290**, may be screwed up and down in base platform **320** from below with an Allen wrench which fits the cap head screw below the ball. Referring back to Fig. 1, rail **100** provides a slit or groove **81** through which an Allen wrench may be inserted to screwably adjust the ball-headed screw **325** through hole 325"" 325'" in the base plate **201** and hole 325"" 325'" in platform **300**.

[0026]

a3. Fig. 4 is a posterior cross sectional view of the platform **200** through the line 4-4 of Fig. 3. Camera carrier **260** and mounting screw 265 265' slideably engage T-edge or rail 261" 261' and are ~~slideably~~ tiltably supported on carrier **290**. Knob **270** moves a compressive screw into space or groove **86** to fix the platform **200** in spaced

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a3
carb relationship with the optical axis of the telescope and camera. As previously noted, knob **250** moves platform or base **320** in a plane perpendicular with the said optical axis of the telescope and camera to align their respective optical center lines. Carrier or platform **320** is allowed to smoothly move in the body **200** by bearings **252** and **253** and screws **254** in the platform.

[0028]

a4 Fig. 6 is a cross sectional view of the platform **200** through the line 6-6 of Fig. 5 which further discloses the spaced relation of the parts of the platform. Each of the parts is consistently numbered throughout the drawings. This figure more clearly demonstrates the relationship between the adjustment passages **325''** **325'** and **325'''** **325''** which permit the manipulation of the ball headed screw **325** to tilt platform **290** to achieve a high degree of linear alignment of the camera lens with the optical axis of the telescope system to which it is attached. As previously noted, the rail **100** after insertion in slot **86** as shown in Fig. 1 is provided with slot **81** which allows an Allen wrench to be inserted into the body while the camera is in place to adjust the tilt of the camera platform.

[0030]

a5 Fig. 8 shows hood **2** fabricated from a water resistant fabric incorporating a flexible wire frame on at least two edges to hold the fabric around the two lens system. The fabric may be made from any lightweight and opaque material. The hood could also be fabricated from lightweight elastomeric material. The hood **2** may be further connected or attached to the rail **100** by the flexible wire frame; or, alternatively, may be attached after alignment without attachment to the rail. Fig. 9 shows the hood **2** attached to rail **100** from the opposite side of the hood system shown in Fig. 8. Any method of attachment may be used such as the wrapping of the metal wire around the frame **100** such as shown in **2''** **2'**, or by other well-known means of attachment.
